TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371

Attorney Docket No. 01234	
U.S. Application No. (if known, see 37 CFR 1.5) 10/019446	
INTERNATIONAL APPLICATION NO. PCT/EP00/06060	INTERNATIONAL FILING DATE June 29, 2000
PRIORITY DATE CLAIMED June 29, 1999	

TITLE OF INVENTION
METHOD FOR ADJUSTING OR CONTROLLING THE DIET AND/OR A PERSON'S CONSUMPTION

APPLICANT(S) FOR DO/EO/US
Heiner Stegmann

Applicant herewith submits to the United States Designated Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☐ This is an express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
   a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☒ has been transmitted by the International Bureau.
   c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3).
   a. ☐ are transmitted herewith (only if not required by the International Bureau).
   b. ☐ have been transmitted by the International Bureau.
   c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
   d. ☐ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3).
9. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4).
10. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5).

Items 11 to 16 below concern document(s) or information included:

11. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☐ As assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☒ A FIRST preliminary amendment.
    ☐ A SECOND or SUBSEQUENT preliminary amendment.
14. ☐ A substitute specification.
15. ☐ A change of power of attorney and/or address letter.
16. ☒ Other items or information:
    German text to which declaration is attached

17. ☒ The following fees are submitted:	CALCULATIONS PTO USE ONLY	
BASIC NATIONAL FEE (37 CFR 1.492 (a)(1)-(5): Neither international preliminary examination fee (37 CFR 1.482) Nor international search fee (37 CFR 1.445(a)(2) paid to USPTO And International Search Report not prepared by EPO or JPO..... $1,040.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by EPO or JPO.....$890.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International search fee (37 CFR 1.445(a)(2)) paid to USPTO..... $740.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) But all claims did not satisfy provisions of PCT Article 33(1)-(4).....$710.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) And all claims satisfied provisions of PCT Article 33(1)-(4)..... $100.00		
ENTER APPROPRIATE BASIC FEE AMOUNT =	$890.00	
Surcharge of **$130.00** for furnishing oath or declaration later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492(e).	$	

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total Claims	11 -20=		X $18.00	$	
Independent Claims	2 -3=		X $84.00	$	
MULTIPLE DEPENDENT CLAIM(S) (if applicable)				$	
			TOTAL OF ABOVE CALCULATIONS =	$890.00	
Reduction of ½ for filing by small entity, if applicable. A Small Entity Statement must also be filed (Note 37 CFR 1.9, 1.27, 1.28).				$445.00	
			SUBTOTAL =	$445.00	
Processing fee of **$130.00** for furnishing English translation later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492(f).				$	
			TOTAL NATIONAL FEE =	$445.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31).				$	
			TOTAL FEES ENCLOSED =	$445.00	
				Amount to be refunded:	$
				charged:	$

a. ☐ A check in the amount of $ to cover the above fees is enclosed.

b. ☐ Please charge my Deposit Account No. 04-0753 in the amount of $ to cover the above fees. A duplicate copy of this sheet is enclosed.

c. ☐ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 04-0753. A duplicate copy of this sheet is enclosed.

d. ☒ A payment of $ 445.00 is made by credit card. A Credit Card Payment Form (PTO-2038) is attached hereto. The Commissioner is hereby authorized to charge payment of any additional filing fees required under 37 CFR 1.16 or any patent application processing fees under 37 CFR 1.17, or credit any over payment to the credit card account shown on the attached Credit Card Payment Form. Refund of all amounts overpaid, including those of twenty-five dollars or less, is specifically requested. Any fees not accepted by the credit card shown on Form PTO-2038 may be charged to Deposit Account No. 04-0753.

SEND ALL CORRESPONDENCE TO:
Dennison, Scheiner & Schultz
612 Crystal Square 4
1745 Jefferson Davis Highway
Arlington, VA 22202-3417
Telephone (703) 412-1155 Ext. 23
Facsimile (703) 412-1161

SIGNATURE
Ira J. Schultz
NAME
28666
REGISTRATION NUMBER

Dkt. 01234

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: Group Art Unit:

HEINER STEGMANN Examiner:

Serial No.: US National Phase of PCT/EP00/06060

Filed: concurrently herewith

For: METHOD FOR ADJUSTING OR CONTROLLING THE DIET AND/OR A PERSON'S CONSUMPTION

PRELIMINARY AMENDMENT

Honorable Assistant Commissioner for Patents
Washington, DC 20231

Sir:

Before calculation of the filing fee, please amend the above-identified application as follows:

IN THE CLAIMS:

Please amend the claims as set forth hereinbelow and in the attached appendix:

Page 9, lines 1-3: WHAT IS CLAIMED IS:

3. (Amended) Method according to claim 1, characterized by the fact that for determining the performance capacity the individual anaerobic threshold of the person is measured or determined.

4. (Amended) Method according to claim 1, characterized

LAW OFFICES
DENNISON, SCHEINER, SCHULTZ & WAKEMAN
612 CRYSTAL SQUARE 4
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202-3417
703 412-1155

by the fact that for determining the performance capacity a scaling of the performance measured above the individual anaerobic threshold occurs according to the lactate accumulation rate ΔA.

5. (Amended) Method according to claim 1, characterized by the fact that the stress is used as a basis for the IAT and the lactate accumulation rate ΔA in determining the nutrition and/or the consumption of a person with regard to his/her carbohydrate and/or fat and/or protein percentages.

6. Method according to claim 1, characterized by the fact that the individual anaerobic threshold according to Stegmann is used a basis for determining the nutrition and/or consumption of the person with regard to his/her carbohydrate and/or fat and/or protein percentages.

7. (Amended) Method according to claim 1, characterized by the fact that when stress occurs in a person over an extended period of time below his/her individual anaerobic threshold, the fat percentage of the nutrition is adjusted comparatively higher than the carbohydrate and the protein percentages.

8. (Amended) Method according to claim 1, characterized by the fact that with a lactate accumulation rate ΔA against ΔA_{max} the protein percentage of the nutrition is adjusted up to several times as high as with $\Delta A = 0$.

LAW OFFICES
DENNISON, SCHEINER, SCHULTZ & WAKEMAN
612 CRYSTAL SQUARE 4
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202-3417
703 412-1155

9. (Amended) Method according to claim 1 for determining the lactate accumulation rate ΔA, comprising the steps of:

measuring the time-dependent lactate concentration change beyond the individual anaerobic threshold,

adjusting a measurement curve to measurement values gained this way, in which the lactate concentration in relation to time is plotted,

determining a first gradient in the measurement curve at a time t_{IAT} that corresponds to the individual anaerobic threshold,

determining at least one additional gradient in the measurement curve at a time t_x with $t_x > t_{IAT}$

subtracting the second gradient from the first gradient to determine a difference, which represents the lactate accumulation rate ΔA.

10. (Amended) Method according to claim 1, characterized by the fact that for determining the performance capacity, different types of stress such as running tests, swimming tests, stepping tests, ergometry methods with graduated or continuous stress increase with and without breaks are used.

LAW OFFICES
DENNISON, SCHEINER, SCHULTZ & WAKEMAN
612 CRYSTAL SQUARE 4
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202-3417
703 412-1155

REMARKS

The claims have been amended to delete all multiple dependencies, and to generally place the claims in better form for US practice.

Respectfully submitted,

Ira J. Schultz
Registration No. 28666

LAW OFFICES
DENNISON, SCHEINER, SCHULTZ & WAKEMAN
612 CRYSTAL SQUARE 4
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202-3417
703 412-1155

APPENDIX

IN THE CLAIMS:

Page 9, lines 1-3: [Patent Claims Method for Adjusting or Controlling a Person's Nutrition and/or Consumption] <u>WHAT IS CLAIMED IS:</u>

3. (Amended) Method according to claim 1 [or 2], characterized by the fact that for determining the performance capacity the individual anaerobic threshold of the person is measured or determined.

4. (Amended) Method according to [at least one of the previous claims] <u>claim 1</u>, characterized by the fact that for determining the performance capacity a scaling of the performance measured above the individual anaerobic threshold occurs according to the lactate accumulation rate ΔA.

5. (Amended) Method according to [at least one of the previous claims] <u>claim 1</u>, characterized by the fact that the stress is used as a basis for the IAT and the lactate accumulation rate ΔA in determining the nutrition and/or the consumption of a person with regard to his/her carbohydrate and/or fat and/or protein percentages.

6. Method according to [at least one of the previous claims] <u>claim 1</u>, characterized by the fact that the individual anaerobic threshold according to Stegmann is used a basis for determining the nutrition and/or consumption of the person

LAW OFFICES
DENNISON, SCHEINER, SCHULTZ & WAKEMAN
612 CRYSTAL SQUARE 4
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202-3417
703 412-1155

with regard to his/her carbohydrate and/or fat and/or protein percentages.

7. (Amended) Method according to [at least one of the previous claims] claim 1, characterized by the fact that when stress occurs in a person over an extended period of time below his/her individual anaerobic threshold, the fat percentage of the nutrition is adjusted comparatively higher than the carbohydrate and the protein percentages.

8. (Amended) Method according to [at least one of the previous claims] claim 1, characterized by the fact that with a lactate accumulation rate ΔA against ΔA_{max} the protein percentage of the nutrition is adjusted up to several times as high as with $\Delta A = 0$.

9. (Amended) Method according to [at least one of the previous claims] claim 1 for determining the lactate accumulation rate ΔA, [characterized by the following procedural steps] comprising the steps of:

measuring the time-dependent lactate concentration change beyond the individual anaerobic threshold,

adjusting a measurement curve to measurement values gained this way, in which the lactate concentration in relation to time is plotted,

determining a first gradient in the measurement curve at a time t_{IAT} that corresponds to the individual anaerobic

LAW OFFICES
DENNISON, SCHEINER, SCHULTZ & WAKEMAN
612 CRYSTAL SQUARE 4
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202-3417
703 412-1155

threshold,

determining at least one additional gradient in the measurement curve at a time t_x with $t_x > t_{IAT}$

subtracting the second gradient from the first gradient to determine a difference, which represents the lactate accumulation rate ΔA.

10. (Amended) Method according to [at least one of the previous claims] claim 1, characterized by the fact that for determining the performance capacity, different types of stress such as running tests, swimming tests, stepping tests, ergometry methods with graduated or continuous stress increase with and without breaks are used.

LAW OFFICES
DENNISON, SCHEINER, SCHULTZ & WAKEMAN
612 CRYSTAL SQUARE 4
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202-3417
703 412-1155

Description

Method for Adjusting or Controlling a Person's Nutrition and/or Consumption

The invention relates to a method for adjusting or controlling the nutrition and/or consumption of carbohydrates and/or fats and/or proteins of a person who is subjected to a certain physical stress.

The invention relates in particular to a method for determining necessary nutrition and/or nutritional therapeutic substances for controlling a person's nutrition by indirectly determining his/her individual carbohydrate, fat and protein shares in the provision of his/her energy level through standardized stress tests and the controlled consumption of such shares while taking the results that were determined in the standardized stress tests into consideration.

Carbohydrates, fats and proteins are substrates, which are metabolized in the muscles for energy production, e.g. ATP production. During the transition from a resting position to a state of strong stress, great changes occur in the muscle's metabolism. Due to the increased need for energy, especially the rate of substrate conversion increases drastically.

In this context it is of great importance that in the muscle under stress also the conversion rate ratios of the individual

substrates to each other change tremendously, i.e. the percentage of carbohydrate, fat and protein conversion in the overall substrate conversion process is regulated in the muscle as a function upon stress.

The invention is based on the problem of developing a method of the above-described kind in such a way that with simple measures a reliable adjustment or control of a person's nutrition and/or consumption as a function upon the relevant stress in relation to the carbohydrate and/or fat and/or protein percentages occurs, wherein especially among people who are exposed to great stress such as athletes or sick or elderly people a controlled adjustment of the supplied carbohydrates and/or fats and/or proteins or the consumption occurs. According to the invention, the problem is largely resolved by the fact that for the control and/or adjustment of the person's nutrition and/or consumption his/her performance capacity is determined by determining characteristic performance capacity parameters and that as a function upon the determined performance capacity the carbohydrate and/or fat and/or protein percentage requirements and/or consumption by the person is determined, by basing the calculation on the stress that is decisive for nutrition and/or consumption.

According to the invention it is suggested that, for

LAW OFFICES
DENNISON, SCHEINER, SCHULTZ & WAKEMAN
612 CRYSTAL SQUARE 4
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202-3417
703 412-1155

controlling and/or adjusting the nutrition and/or consumption of nutrients in a person, his/her performance capacity is determined by determining characteristic performance capacity parameters and that his/her need for and/or consumption of carbohydrates and/or fats and/or proteins in his/her food is determined as a function upon the determined performance capacity of the person, basing the calculation on stress-specific substrate mixture ratios that are decisive for nutrition and/or consumption. Substrate mixture ratios should be interpreted as the carbohydrate and/or fat and/or protein percentages.

In particular the invention provides for the fact that for the purpose of determining the performance capacity of the person the heart rate and/or blood pressure and/or ergospirometric parameters and/or lactate concentration in the blood is measured or determined as a function upon the stress.

In a preferred embodiment of the invention, a scaling to a lactate accumulation rate ΔA occurs for the purpose of determining the performance capacity above the individual anaerobic threshold, wherein in particular the lactate accumulation rate ΔA is used as a basis for determining the nutrition and/or consumption of the person in relation to his/her protein percentage from glucogenic amino acids.

A method for determining the lactate accumulation rate ΔA

LAW OFFICES
DENNISON, SCHEINER, SCHULTZ & WAKEMAN
612 CRYSTAL SQUARE 4
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202-3417
703 412-1155

is characterized by the following procedural steps:

measuring the time-dependent lactate concentrate change beyond the individual anaerobic threshold,

adjusting a measurement curve to measurement values gained this way, in which the lactate concentrate in relation to time is entered,

determining a first gradient in the measurement curve at a time t_{IAT} that corresponds to the individual anaerobic threshold,

determining at least one additional gradient in the measurement curve at a time t_x with $t_x > t_{IAT}$

subtracting the second gradient from the first gradient to determine a difference, which represents the lactate accumulation rate ΔA.

In order to be able to provide information about the stress-specific regulation of the substrate metabolism of test subjects, initially the performance capacity stress ability of these test subjects must be determined with a standardized test, which allows the possibility of estimating the aerobic/anaerobic transition. Such tests can be conducted with various methods.

For the determination of the performance capacity, different stress types can be applied such as running tests, swimming tests, stepping tests, ergometry methods, e.g. bicycle, treadmill, rowing ergometry with gradual and/or continuous stress

LAW OFFICES
DENNISON, SCHEINER, SCHULTZ & WAKEMAN
612 CRYSTAL SQUARE 4
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202-3417
703 412-1155

increase, performed with or without breaks.

Alternatively, the following parameters, which can be measured or deduced from the measurement parameters, can be used to determine the performance capacity:

heart rate (HF) under stress

HF max (with stress)

HF submax (anaerobic-aerobic transition: Conconi test)

HF related performance (physical working capacity)

HF related oxygen intake

blood pressure (RR)

stress blood pressure (systolic)

blood pressure amplitude

ergospirometric parameters

minute volume (AMV)

oxygen intake (VO_2)

maximum VO_2 (VO_2 max)

respiration rate (AF)

carbon dioxide emission (VCO_2)

respiratory equivalent (AÄ = AMV/ VO_2)

oxygen pulse (VO_2 / HF)

acid/base status, pH value

LAW OFFICES
DENNISON, SCHEINER, SCHULTZ & WAKEMAN
612 CRYSTAL SQUARE 4
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202-3417
703 412-1155

respiratory quotient (RQ)

ventilatory equivalent for CO_2 and O_2

anaerobic threshold (according to Wasserman)

individual anaerobic threshold (according to Stegmann)

lactate concentration in blood

IATs according to Stegmann

ΔA according to Stegmann

Lactate threshold concepts with fixed lactate concentration and gradients

model-related parameters deduced from the lactate curve parameters deduced from lactate curve and ergospirometric data.

The most exact method however is the determination of the lactate performance curve in the graduated test with determination of the individual anaerobic threshold according to Stegmann (IATs) as well as the IATs-adjusted lactate accumulation rate ΔA.

The lactate performance curve of a human being can be changed only very slowly through training and/or lifestyle. From its course, information can therefore be deduced about the performance and training behavior of a human being over an extended period of time, i.e. the lactate performance curve of a person can be interpreted as "medium-term memory" of his/her

LAW OFFICES
DENNISON, SCHEINER, SCHULTZ & WAKEMAN
612 CRYSTAL SQUARE 4
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202-3417
703 412-1155

lifestyle.

In relation to the IATs and the ΔA value of a test subject and with consideration of the above-described explanations, the following general statements with regard to the carbohydrate, fat and protein consumption of a test subject under stress can be made (ΔA_{max} = largest determinable ΔA value in a test subject)

Stress Intensity	*Duration*	*CH*	*Fat*	*Protein*
Start and graduated start	very short[s]	+	++	+++
> IATs, ΔA -> ΔA_{max}	short[≤ min]	+	++	+++
> IATs, ΔA << ΔA_{max}	short[6-10 min]	++	++	++
≤ IATs	short[> 2 min]	++	++	+
≤ IATs	medium[< 60 min]	++	++	+
≤ IATs	long[>60 min]	++	+++	++

The relative stress intensities and stress duration periods, to which a person is exposed e.g. in his/her daily life or during sports activities, therefore regulate the ratios of carbohydrate, fat and protein percentages in his/her nutrient consumption. These ratios are shown as a rough outline in the above table. These results can be applied directly for the development of required formula nutrition or nutritional therapeutics that have been adjusted to the

LAW OFFICES
DENNISON, SCHEINER, SCHULTZ & WAKEMAN
612 CRYSTAL SQUARE 4
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202-3417
703 412-1155

individual performance capacity so as to avoid nutritional deficiencies.

When adjusted to the individual anaerobic threshold and/or the adjusted lactate accumulation rate ΔA, the need for carbohydrate, fat and protein percentages as a function upon stress intensity and stress duration - in accordance with the table - offers the possibility to expose a test subject to stress in such a controlled manner that carbohydrates and/or fat percentages are used in the desired scope.

The method according to the invention thus represents a connection between knowledge about stress-specific substrate consumption, i.e. carbohydrate, fat and protein consumption of a person, and the possibility to evaluate this specificity based on performance tests and to deduce individual nutritional recommendations or control the substrate consumption through appropriate selection of training modes.

LAW OFFICES
DENNISON, SCHEINER, SCHULTZ & WAKEMAN
612 CRYSTAL SQUARE 4
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202-3417
703 412-1155

Patent Claims

Method for Adjusting or Controlling a Person's Nutrition and/or Consumption

1. Method for adjusting or controlling the nutrition and/or consumption of carbohydrates and/or fats and/or proteins in a person subjected to stress,

characterized by the fact

that for the control and/or adjustment of the nutrition and/or consumption of nutrients in a human being his/her performance capacity is determined by determining characteristic performance capacity parameters and that as a function upon the determined performance capacity the carbohydrate and/or fat and/or protein percentage requirements are determined and/or their consumption by a person, while basing the calculation on the stress, which is decisive for the nutrition and/or consumption.

2. Method according to claim 1,

characterized by the fact

that, for determining the performance capacity, the heart rate and/or blood pressure and/or ergospirometric parameters and/or lactate concentration in the blood are measured or determined as a function upon the stress.

LAW OFFICES
DENNISON, SCHEINER, SCHULTZ & WAKEMAN
612 CRYSTAL SQUARE 4
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202-3417
703 412-1155

3. Method according to claim 1 or 2,

characterized by the fact

that for determining the performance capacity the individual anaerobic threshold of the person is measured or determined.

4. Method according to at least one of the previous claims,

characterized by the fact

that for determining the performance capacity a scaling of the performance measured above the individual anaerobic threshold occurs according to the lactate accumulation rate ΔA.

5. Method according to at least one of the previous claims,

characterized by the fact

that the stress is used as a basis for the IAT and the lactate accumulation rate ΔA in determining the nutrition and/or the consumption of a person with regard to his/her carbohydrate and/or fat and/or protein percentages.

6. Method according to at least one of the previous claims,

characterized by the fact

that the individual anaerobic threshold according to Stegmann is used a basis for determining the nutrition and/or consumption of the person with regard to his/her carbohydrate

LAW OFFICES
DENNISON, SCHEINER, SCHULTZ & WAKEMAN
612 CRYSTAL SQUARE 4
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202-3417
703 412-1155

and/or fat and/or protein percentages.

7. Method according to at least one of the previous claims,

characterized by the fact

that when stress occurs in a person over an extended period of time below his/her individual anaerobic threshold, the fat percentage of the nutrition is adjusted comparatively higher than the carbohydrate and the protein percentages.

8. Method according to at least one of the previous claims,

characterized by the fact

that with a lactate accumulation rate ΔA against ΔA_{max} the protein percentage of the nutrition is adjusted up to several times as high as with $\Delta A = 0$.

9. Method according to at least one of the previous claims for determining the lactate accumulation rate ΔA, characterized by the following procedural steps

measuring the time-dependent lactate concentration change beyond the individual anaerobic threshold,

adjusting a measurement curve to measurement values gained this way, in which the lactate concentration in relation to time is plotted,

determining a first gradient in the measurement curve at a

time t_{IAT} that corresponds to the individual anaerobic threshold,

determining at least one additional gradient in the measurement curve at a time t_x with $t_x > t_{IAT}$

subtracting the second gradient from the first gradient to determine a difference, which represents the lactate accumulation rate ΔA.

10. Method according to at least one of the previous claims,

characterized by the fact

that for determining the performance capacity, different types of stress such as running tests, swimming tests, stepping tests, ergometry methods with graduated or continuous stress increase with and without breaks are used.

11. Method for adjusting and/or controlling the nutrition and/or consumption of carbohydrates and/or fats and/or proteins of a person who is subjected to stress

characterized by the fact

that for the control and/or adjustment of the nutrition and/or consumption of nutrients in a human being his/her performance capacity is determined by determining characteristic performance capacity parameters and that the need for and/or consumption of carbohydrates and/or fats and/or proteins in the

LAW OFFICES
DENNISON, SCHEINER, SCHULTZ & WAKEMAN
612 CRYSTAL SQUARE 4
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202-3417
703 412-1155

food is determined as a function upon the determined performance capacity of the person, while basing the calculation on the stress-specific substrate mixture ratios that are decisive for the nutrition and/or consumption.

LAW OFFICES
DENNISON, SCHEINER, SCHULTZ & WAKEMAN
612 CRYSTAL SQUARE 4
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202-3417
703 412-1155

DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION

Docket No. _____

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

METHOD FOR ADJUSTING OR CONTROLLING THE DIET AND/OR A PERSON'S CONSUMPTION

_____, the specification of which

(check one) _____ is described and claimed in PCT International Application _____ filed on (MM/DD/YYYY) _____ amended on _____ (if applicable) (OR) _____ is described in United States Application Number _____ filed on (MM/DD/YYYY) _____ (OR) X is attached hereto.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR §1.56.

I hereby claim foreign priority benefits under 35 U.S.C. §119(a)-(d) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, any foreign application for patent or inventor's certificate, or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Claimed? Yes	No
199 29 508.5	DE	06/29/1999	X	
199 49 479.7	DE	10/14/1999	X	

I hereby claim the benefit under 35 U.S.C. 119(e) of any Unites States Provisional Application(s) listed below.

Application Number(s)	Filing Date (MM/DD/YYYY)

I hereby claim the benefit under 35 U.S.C. §120 of any United States application(s), or 365(c) of any PCT International application designating the Unites States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. §112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

U.S. Parent Application or PCT Parent	Parent Filing Date	Parent Patent Number

As a named inventor, I hereby appoint the following registered practitioner(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

5 Donald L. Dennison Reg. No. 19920
William H. Meserole Reg. No. 20833
Burton Scheiner Reg. No. 24018
Ira J. Schultz Reg. No. 28666
Scott T. Wakeman Reg. No. 37750

DIRECT ALL CORRESPONDENCE TO:
DENNISON, MESEROLE, SCHEINER & SCHULTZ
1745 Jefferson Davis Highway, Suite 612
Arlington, Virginia 22202-3417

DIRECT TELEPHONE CALLS TO:
(703)412-1155
(703)412-1161 (fax)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor Heiner STEGMANN
(First, Middle, Family Name or Surname)

100 Inventor's signature X Heiner Stegmann Date X 20.12.01.

Residence Germany DEX Citizenship German
(City, State, Country)

Full Post Office Address Friedrich-Ebert-Anlage 25, 63450 Hanau

Full name of second joint inventor _____
(First, Middle, Family Name or Surname)

Second inventor's signature _____ Date _____

Residence _____ Citizenship _____
(City, State, Country)

Full Post Office Address _____

Rev. 8/99